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NEW RECORDS, AND NOTES ON

THE STATUS OF SOME HESPERIIDAE FROM MEXICO

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WHILE AT THE UNITED STATES National Museum in Washington, D. C. during July 1966 I had the opportunity of examining all of their American HesperIIDae and especially their specimens from Mexico. One particular reason for this trip was to check carefully their types and especially those of Dyar that W. H. Evans had placed in synonymy. The results were very interesting in that several of Dyar's "synonyms" were found to be valid species and I will make some remarks in this article pertaining to two of these. Others will be discussed in a later publication.

In the American Museum of Natural History, New York, are located most of E. L. Bell's types of tropical American HesperIIDae, however there is one in particular in Washington that has long interested me. This species is *Mellana mulleri* (Bell) from Mexico which Evans placed as a synonym of *eulogius* (Ploetz) in 1955. While Bell was active at the American Museum of Natural History we corresponded concerning the various species of *Mellana* (then *Atrytone*) that he had described and it surprised me to see that Evans had placed *mulleri* as a synonym of *eulogius* due to several reasons that I will discuss under that species.

Among specimens sent to me by Dr. Tarsicio Escalante, Mexico, D. F., for determination were found two species previously unrecorded for Mexico.

***Bolla cyclops* (Mabille) 1876**

During 1953 Evans described *sonda* as a new subspecies of

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cyclops from Orizaba, Veracruz, Mexico, based on differences in the coloration of the lower surface of the primaries. Apparently he failed to check the genitalia as there are specific differences present between *sonda* and *cyclops*. For quick determination the coloration is sufficient as *sonda* is dusky ochreous on the lower surface of the primaries, whereas *cyclops* is a bright yellow.

Previous records indicate that *cyclops* had been collected from Guatemala to Colombia, while *sonda* was more or less confined to the section of Veracruz in Mexico near Orizaba.

Among specimens received from Dr. Escalante were five examples of *cyclops*, one male, and four females, all from Sta. Rosa, Comitán, Chiapas, Mexico (May 1965). This is the first record of *cyclops* from Mexico.

Piruna cyclosticta (Dyar) 1920

This species was placed as a synonym of *brunnea* (Scudder) 1872 by Evans in 1955. Since that time I have collected rather widely over Mexico and found that actually there are two species involved that somewhat resemble each other superficially. While in Washington I examined the type of *cyclosticta* and found that it agreed with some specimens that I had from Tehuacan, Puebla (August 14, 1964, H. A. Freeman) and Aguas Calientes, Aguascalientes (August 1956, Stallings & Turner), and also that the figure in Seitz of *cyclosticta* was very accurate. The information contained in Evans key to *brunnea* does not agree with *cyclosticta*. I have specimens of *brunnea* from Oaxaca, Oaxaca (June 23, 1966, H. A. Freeman), and Tierra Colorada and Acahuizotla, Guerrero (August and September). There are specific differences in the genitalia, however the easiest way to separate the two species is by the following differences: (1) *brunnea* is slightly larger, average total expanse, 26mm., whereas *cyclosticta* averages 22 mm.; (2) *brunnea* never has a second spot in space 2 located between the distal spot in that space and the base, while *cyclosticta* has such a spot present; (3) *brunnea* is darker than *cyclosticta* being nearly black, while *cyclosticta* is more grayish-brown; and (4) all spots are better defined in *cyclosticta* than they are in *brunnea*.

Apparently the only material examined by Evans was the four specimens from Oaxaca, Mexico and the one from Guatemala contained in the British Museum. These are all *brunnea* as all that I found in the Oaxaca area was that species. In the state of Puebla northwestward to Aguascalientes only *cyclosticta* was found.

From the above mentioned information I am removing *cyclosticta* from the synonymy of *brunnea* and giving it full specific status.

***Dalla dividuum* (Dyar) 1913**

This species was placed as a synonym of *ligilla* (Hewitson) 1877 by Evans in 1955. After carefully examining the type of *dividuum* (Dyar) in Washington I found that it matched perfectly the figure of that species in Seitz, and did not agree with his figure of *ligilla*. Recently I obtained a number of specimens of *ligilla* from Dr. Escalante that were collected at Catemaco, Veracruz, and Comitán and Ocozingo, Chiapas. These agreed perfectly with the figure in Seitz of that species as well as Evans' sketch of the male genitalia, so there is no doubt as to their status. During July 1967 I received from Robert Wind four males and a female *Dalla* that he had collected at Salada, Colima, Mexico during June 1967. These I mounted and noticed at once that they agreed with the figure in Seitz of *dividuum*, and also with the notes that I had taken of the type in Washington. I dissected a male and noticed that the genitalia were not like those of *ligilla* so proving beyond a doubt that actually there are two separate species involved. The figures of the genitalia of these two species will be presented in a later publication. There are several differences that are readily discernable between these two species: (1) *ligilla* is slightly larger averaging 30 mm. total expanse, while *dividuum* averages 28 mm.; (2) the elongated spot in space 3 of *ligilla* overlaps the spot in space 2 and reaches the outer edge of the cell spot, while in *dividuum* this spot is a tiny dot located beneath the apical spots and well separated from the spot in space 2 and the cell spot; (3) in *ligilla* the large yellowish central spot on the upper surface of the secondaries is not broken by dark veins, while in *dividuum* it appears macular due to the presence of dark veins; (4) on the lower surface of the secondaries *ligilla* has a dark brownish area between the discal spots and the margin which is not present in *dividuum*; and (5) on this same surface in *ligilla* there is one large yellowish spot located below the costa and situated over the large upper discal spot and the elongated cell spot, while in *dividuum* there are two smaller spots located in this same area.

From the information presented there is no doubt as to the specific validity of the name *dividuum* and with this I remove the name from the synonymy.

Mellana mulleri (Bell) 1942

E. L. Bell described *mulleri* in 1942 from four specimens that were collected in the state Guerrero in Mexico. The type is in the United States National Museum and I examined it while I was there. Evans recorded this species under the synonymy of *eulogius* (Ploetz) as “? *mulleri* Bell 1942: male Mexico: genitalia figured”. The question mark indicating that he was not certain about this as apparently he had not examined the type. *Eulogius* is a very variable species and I have collected it in a number of areas in Mexico as well as at Brownsville, Texas. It is very common in parts of Guerrero, Puebla, and especially in the Valles area of San Luis Potosi. I have in my collection over fifty specimens of that species and even though it is variable it does not ever show the distinguishing characteristics of *mulleri*. During August 1962 I collected two males and five females of *mulleri* in the mountains just west of Ciudad Victoria, Tamaulipas, Mexico. Both males were dissected and compared with Bell's drawing of the genitalia of *mulleri* and a number of the genitalia of *eulogius* so as to make a careful comparison between the two. It was a simple matter to readily separate the two species since *mulleri* has one of the most distinctive genitalia of the *Mellana*. Godman and Savin present a fine drawing of the genitalia of *eulogius* under the name of *mellona* Godman in their Biologia Centrali-Americana, plate 94, figure 19. Actually, in appearance, *mulleri* more closely fits in with the *nayana* Bell group than with the *eulogius* group but can be separated by the genitalia very easily. By superficial characteristics *mulleri* males differ from *eulogius* in the following ways: (1) in *mulleri*, on the upper surface of the primaries, the fulvous coloration is more extensive than in the most extreme examples of *eulogius* as represented by the figures of *mellona* plate 94, figures 17 and -8 in the Biologia; (2) in *mulleri*, on the upper surface of the secondaries, the discal fulvous spots are much broader than in *eulogius* thus producing a more narrow brown outer margin; (3) on this same surface, the easiest way to separate the two species is in the shape of the spots in spaces 5 and 6. In *eulogius* these spots are smaller than the rest of the discal band and the spot in space 5 does not touch the cell spot, while in *mulleri* the spot in space 5 is the largest in the discal band and touches the cell spot, and the spot in space 6 is elongated and situated directly over the center of the spot in space 5; and (4) *mulleri* has a somewhat blurred appearance due to the suffusion of

fulvous scales over the dark areas of the upper surface of the primaries. *Eulogius* does not have this appearance even in the lighter specimens where the fulvous coloration is more extensive than in the typical examples. In the females the differences can be determined by the following characteristics: (1) *mulleri* is a much browner species, with rather indistinct fulvous maculation on the primaries, while *eulogius* is dark with a slight olive cast, and the maculation is distinct with the spots in spaces 2 and 3 white; (2) *mulleri* has a double fulvous cell spot over the inner edge of the spot in space 2, while *eulogius* rarely has any spots in the cell area, if present they are situated inward from the spot in space 2; and (3) in *mulleri*, on the upper surface of the secondaries, the discal band is broad and rather indistinct, while in *eulogius* the discal band varies from none at all to a clearly defined row of yellow spots. *Mulleri* differs from *nayana* (Bell) by being more orange-yellow on the lower surface instead of the bright yellow of *nayana*, nor does *nayana* have the blurred appearance of *mulleri*.

From the present information I would like to remove *mulleri* from the synonymy and give it the full specific rank that it deserves.

***Mellana fieldi* (Bell) 1942**

This species was described from Guatemala. In the British Museum there are but three males and a female present and these came from Guatemala. Among the many specimens that I have received from Dr. Escalante for determination were present three males of *fieldi* from Catemaco, Veracruz, collected during December 1963, and one male and two females from Sta. Rosa, Comitán, Chiapas, Mexico, collected during September 1963. These are the first records for the occurrence of *fieldi* in Mexico.

This species bears a slight resemblance to *eulogius* but can readily be separated by the orange-red maculation and orange-red fringes. It is a much darker species on the lower surface of both wings. The genitalia readily separate the two species as well.

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